1. Cat 1912.

PLANTS COLLECTED IN GUADALUPE ISLAND BY DR. F. FRANCESCHI

DURING DECEMBER 1892 & JANUARY 1893.

1. ERYTHEA EDULIS WATS.

FROM THE N.W. PART OF THE ISLAND, WHERE IS THE PRINCIPAL GROVE OF THEM, NOT LESS THAN 1½ MILES LONG BY ½ TO ONE MILE BROAD. THERE, & IN THE FEW MORE POINTS WHERE PALMS ARE STILL GROWING, THEIR RANGE IN ALTITUDE APPEARS TO BE BETWEEN 300 & 1200 FEET. A FEW EXPANDED FLOWERS WERE TO BE FOUND ALREADY AT THE BEGINNING OF DECEMBER, BUT THE GENERAL BLOSSOMING TAKES PLACE IN JANUARY, & THE FRUITS ARE RIPE IN APRIL.

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2. PINUS INSIGNIS VAR. BINATA ENG.

ONLY ON THE NORTHERN & NORTH WESTERN PART, THE FINEST GROWING AMONG THE GROVE OF PALMS. ON SOME TREES BOTH THE ABNORMAL TWOLEAVED & THE NORMAL THREE LEAVED FORM ARE TO BE OBSERVED EVEN ON THE SAME BRANCH. THEIR RANGE IN ALTITUDE APPEARS LIMITED BETWEEN 800 & 3000 FEET.

3. CUPRESSUS GUADALUPENSIS WATS.

CENTRE OF THE ISLAND & ABOUT THE SPRINGS. EXCEEDINGLY VARIABLE IN HABIT, IN COLOUR, ALSO IN SIZE & SHAPE OF THE FRUITS. THE PRINCIPAL GROVE ON THE HIGHER CENTRAL PLATEAU COVERS AN AREA BETWEEN TWO & THREE SQUARE MILES. RANGE IN ALTITUDE FROM 2500 TO 4000 F.

4. QUERCUS TOMENTELLA ENG.

FROM THE NORTHWESTERN PART, GROWING TOGETHER WITH THE PALMS IN FINE PYRAMIDAL SPECIMENS 40 TO 60 FEET HIGH, REMARKABLE FOR

2.

THE GREYSH COLOUR OF THE BARK, & THE SIZE OF THE LEAVES, GLOSSY & DARK GREEN ABOVE & COVERED WITH A SOMEWHAT RUTY TOMENTUM ON THE UNDER PART.

5. THE SAME, RATHER AN INFERIOR FORM.

FROM THE EASTERN PART, RIGHT UNDER THE CLIFF OF THE LOWER CIR-
CUS (SEEN IN TWO PLACES 1½ MILES APART) DIFFERING FROM THE ABOVE NOT ONLY IN THE ASPECT OF THE LEAVES & THE BARK WHICH IS DARKER & CORKY, BUT ALSO BY THE TREES BEING STUNTED & BRANCHING FROM THE BASE.

NO ACORNS NOR CAPSULAE BEEN FOUND OF THESE OAKS.

BESIDES THE THREE MENTIONED LOCALITIES, A FEW SCATTERED TREES GROW ALSO NEAR THE NORTH END, & A FEW ON THE SOUTHERN PART (THE ONLY TREE THERE). THESE NOT BEEN ABLE TO ASCERTAIN TO WHAT FORM THEY BELONG. OAKS APPEAR NOT TO GROW ABOVE 1800 TO 2,000 F. ELEVATION.

6. CEANOTHUS CRASSIFOLIUS NUTT.

SHRUB 12 TO 15 FEET HIGH. ONLY ONE FOUND ALIVE ABOUT THE CENTRE OF THE ISLAND WEST OF MOUNT AUGUSTA, AMONG THE CYPRESSES, BUT SURROUNDED BY WHAT APPEAR TO BE THE DEAD STUMPS OF THOUSANDS OF HIS BRETHREN, WHICH MUST HAVE FORMED A THICK & GENERAL UNDERGROWTH, NOT ONLY IN THE LARGER CYPRESS GROVE, BUT ALSO IN THE SMALLER NEAR THE SPRINGS (WHICH IN FACT WERE FORMERLY A CONTINUOUS FOREST) THREE OR FOUR MORE LIVING PLANTS HAVE BEEN REPORTED AFTERWARDS TO HAVE BEEN SEEN BY A GOAT HUNTER, STILL UNDER THE CYPRESSES.

7. PERITYLE INCANA GRAY

BY FAR THE MOST ABUNDANT OF SHRUBS STILL LIVING ON THE ISLAND, & THE

MOST LIKELY TO SURVIVE UNDER THE PRESENT UNFAVOURABLE CIRCUM-
STANCES, LOOKING QUITE AT HOME ON THE MORE PRECIPITOUS CLIFFS,
SEEDLINGS BEING PLENTIFUL IN THE CREVICES OF THE ROCKS. A FEW
STRAGGLING FLOWERS APPEARED AS EARLY AS DECEMBER 15.

8. CONVOLVULUS MACROSTEGIUS GREENE

HIGHLY RELISHED BY GOATS, BUT STILL KEEPS ITS HOLD ON THE MOST
PERPENDICULAR CLIFFS, WHERE ITS DROOPING DEEP GREEN MASSES FORM
A STRIKING CONTRAST WITH THE SILVERY FOLIAGE OF THE PRECEDING.
NO SEED COULD BE FOUND, NOR ANY EMPTY SEED CAPSULE . HAVE SAVED
HOWEVER ONE SEEDLING WHICH IS THRIVING.

9. RHUS LAURINA NUTT.

PROBABLY THE SAME FOUR PLANTS SEEN BY DR. PALMER IN 1875 ARE
THOSE THAT EXIST STILL, NOT MUCH APART FROM EACH OTHER, ON THE
BASALTIC CLIFF EAST OF THE CABINS. ANOTHER ONE, TOO HIGH TO
BE SURELY IDENTIFIED, SEEN ON THE RIGHT BANK OF THE CANON
NEAR THE LANDING.

10. SENECIO PALMERI GRAY

A VERY CONSPICUOUS SHRUB, WHITER EVEN THAN PERITHYLE INCANA.
PERHAPS THREE DOZEN SPECIMENS SEEN ON THE EASTERN CLIFF BEFORE
MENTIONED.

11. ARTEMISIA CALIFORNICA LESS.

FRUTESCENT & WOODY, GROWING IN THE SAME LOCALITY IN TOLERABLE
NUMBER, & ALSO ONE MILE OR SO MORE TO THE NORTH.

12. LAVATERA OCCIDENTALIS WATS.

A FEW SCATTERED SPECIMENS, ALL ON THE MOST INACCESSIBLE

ROCKS, EAST OF THE ISLAND. A FEW SEEDLINGS COLLECTED . NONE SURVIVED.

13. SPHAERALCEA SULPHUREA WATS.

MUCH MORE ABUNDANT THAN THE PRECEDING, & ONE OF THE VERY FEW PLANTS OF WHICH SOME MEAGRE LOOKING INDIVIDUALS ARE TO BE SEEN EVEN IN PLACES OCCASIONALLY VISITED BY GOATS. SEEDLINGS & YOUNG PLANTS OBSERVED NEAR THE LANDING, BOTH ON THE BARE LAVA ROCK & ON THE GRAVEL OF THE BEACH.

15. SOLANUM XANTI VAR: WALLACEI

ONLY TWO PLANTS SEEN ON THE EASTERN CLIFF SOUTH OF THE CORRAL, IN ALMOST INACCESSIBLE POSITION. AN ELEGANT SHRUB WELL WORTHY OF INTRODUCTION IN GARDENS, ALREADY IN FLOWER AT THE BEGINNING OF JANUARY: THE RATHER LARGE FLOWERS ARE BRIGHT BLUE, NOT AT ALL PALE, & STAND WELL ON THE DEEP GREEN FOLIAGE.

16. SOLANUM NIGRUM L.

A FORM WITH RATHER LARGE LEAVES & QUITE MINUTE FLOWERS, FROM WHITE TO LILAC. A FEW FOUND IN THE CREVICES OF THE LOWER CIRCUS, OTHERS IN THE CAÑON NEAR THE LANDING.

17. SOLANUM DOUGLASI DUNAL

PERENNIAL, WITH RATHER CONSPICUOUS STAR SHAPED PURE WHITE FLOWERS, FORMING PRETTY LOW BUSHES. THREE PLANTS FOUND NEAR THE LANDING.

19. ESCHSCHOLTZIA CALIFORNICA CHAM.

PLENTIFUL IN THE SAME LIMITED LOCALITY POINTED OUT BY PROF . GREENE: POSITIVELY PERENNIAL: CLOSELY CLIPPED BY GOATS.

20. ESCHSCHOLTZIA ELEGANS VAR. RAMOSA. GREENE

RATHER PLENTIFUL, NOT ONLY ALONG THE BEACH NORTH OF THE LANDING, AS MARKED BY PROF. GREENE, BUT SEEN ALSO IN THE DRY BED OF THE CAÑON & ON THE BARE LAVA ROCK AT THE MOUTH OF IT. ALL THESE PLANTS APPEAR TO BE ANNUAL.

21. THE SAME! BUT APPARENTLY PERENNIAL, GROWING LUXURIANTLY & IN SOME NUMBER ON A NEARLY INACCESSIBLE CLIFF OF LAVA DETRITUS ON THE RIGHT OF THE CAÑON SOME 500 FEET FROM THE LANDING. ALREADY IN FLOWER AT THE BEGINNING OF JANUARY. THE FLOWERS HAVE NO GREENISH TINGE AT ALL: THEIR PETALS NOT OVER TWO THIRDS OF AN INCH LONG.

22. ERODIUM MOSCHATUM LHER.

PLENTIFUL ALL OVER, CHIEFLY AMONG ROCKS, NOT SO MUCH HOWEVER AS ERODIUM CICUTARIUM, WHICH NOW LITERALLY COVERS THE WHOLE SURFACE OF THE ISLAND. E. MOSCHATUM APPEARS NOT TO BE MUCH LIKED BY GOATS, AS FAR AS THEY HAVE SOMETHING BETTER TO GRAZE ON.

23. LUPINUS NIVEUS WATS.

ANNUAL: VERY PUBESCENT: A FEW SEEDLINGS FOUND IN DIFFERENT LOCALITIES, CHIEFLY ON THE FLAT GROUND NEAR THE LARGEST SPRING, SOUTH OF THE CABINS.

24. HOSACKIA ARGOPHYLLA GRAY

VERY FEW SEEDLINGS FOUND ONLY ON THE BEACH NORTH OF THE LANDING.

25. FILAGO CALIFORNICA NUTT.

QUITE PLENTIFUL, NOT ONLY ON THE CLIFFS & IN CAÑONS, BUT ALSO

ON OPEN GROUND.

26. TRIFOLIUM AMPLECTENS TORR.&GRAY

SEEN ONLY IN THE CAÑON NOT FAR FROM THE LANDING, BUT RATHER SCARCE.

27. TRIFOLIUM PALMERI WATS.

SAME LOCALITY BUT MUCH MORE PLENTIFUL.

29. LEPIGONUM MICROTHECUM (TISSA PALLIDA GREENE)

WOODY PERENNIAL SEEN ONLY ON A PERPENDICULAR ROCK ON THE RIGHT OF THE CAÑON NOT FAR FROM THE LANDING GROWING THERE IN GOOD NUMBERS.

30. MATRICARIA DISCOIDEA DC.

PLENTIFUL NEAR THE SPRINGS ON WET GROUND WHICH IT COVERS WITH A SOFT & DENSE CARPET. LARGER SPECIMENS COLLECTED AT THE SPRING WEST OF THE CABINS, IN BLOOM ALREADY FOR CHRISTMAS.

31. DODECATHEON MEADIA LINN.

MOST ABUNDANT ONLY FROM THE TRAIL TO THE CABINS TO THE ADJOINING CLIFF OF THE LOWER CIRCUS, THE FINEST SPECIMENS ON THE VERY RIDGE OF IT. GOAT HUNTERS SHORT OF TOBACCO HAVE BEEN ATTRACTED BY THE APPEARANCE OF THE LEAVES & TAKEN TO SMOKE THEM. THEY ARE SAID TO POSSESS A VERY PLEASANT TASTE.

32. NEMOPHILA RACEMOSA NUTT.

ALREADY IN FLOWER EARLY IN DECEMBER ON THE NORTHWESTERN PART UNDER THE PALMS. PLENTIFUL AMONG ROCKS ALL OVER. GOATS APPEAR TO DISLIKE IT.

33. KRYNITSKIA MARITIMA GREENE

NEAR THE LANDING IN THE CAÑON & ON THE BANKS OF IT, THE EXCEE-

DINGLY MINUTE WHITE FLOWERS APPEARING EARLY IN JANUARY.

34. MUHLENBERGIA DEBILIS TRIN.

SEEN ONLY NEAR THE LANDING, BOTH ON THE BANKS & IN THE BED OF THE CAÑON, AS WELL AS ON THE BEACH.

35. POLYPOGON MONSPELIENSIS DESF.

PLENTIFUL ONLY ON SALINE SOIL AROUND THE SPRINGS NEAR THE CORRAL. GOATS & DONKEYS APPEAR NOT TO LIKE IT.

36. POLYPODIUM CALIFORNICUM KAULF.

RATHER SCARCE & ALWAYS IN SHADY SHELTERED LOCALITIES.

37. PELLAEA ORNITHOPUS HOOK.

THE MORE SCARCE FERN ON THE ISLAND, SEEN ONLY ON THE EASTERN SIDE ON BASALTIC ROCKS FULLY EXPOSED TO THE SUN.

38. GYMNOGRAMME TRIANGULARIS KAULF.

THE MOST WIDELY SPREAD FERN IN THE ISLAND, GROWING LUXURIANTLY IN DEEP CREVICES OF ROCKS EXPOSED TO THE NORTH, AS WELL AS IN VERY DRY SUNNY SPOTS, THERE MUCH REDUCED IN SIZE.

39. NOTHOLAENA NEWBERRYI EATON

NEARLY AS COMMON AS THE PRECEDING, BUT ALWAYS GROWING IN PLACES FULLY EXPOSED TO THE SUN.

41. CROSSOSOMA CALIFORNICUM NUTT.

ONLY ONE FOUND ON A HIGH CLIFF OF THE LOWER CIRCUS NEAR THE CORRAL, IN SUCH AN INACCESSIBLE POSITION THAT IT WAS IMPOSSIBLE TO SECURE MORE THAN A FEW SMALL SPECIMENS.

42. DIPLOSTEPHIUM CANUM GRAY

ONLY ONE FOUND IN FLOWER & FRUIT AT THE BEGINNING OF DECEMBER

ON THE CLIFF OF THE LOWER CIRCUS EAST OF THE CABINS.

43. PHACELIA PHYLLOMANICA GRAY

SHRUB WITH FEATHERY FOLIAGE DARK GREEN ABOVE & WHITISH UNDERNEATH. GOOD MANY PLANTS GROWING IN A LIMITED SPACE ON THE EASTERN CLIFF NEAR THE CORRAL.

45. MIRABILIS CALIFORNICA GRAY

SEEN ONLY NEAR THE LANDING, BUT THERE QUITE PLENTIFUL, NOT ONLY ALONG THE BEACH, BUT ALSO ON THE PRECIPITOUS SLOPE OVERHANGING THE SEA SOUTH OF THE LANDING, MAKING FINE CARPETS OF FLOWERS ALREADY IN DECEMBER.

46. PERITHYLE CALIFORNICA BENTH.

QUITE PLENTIFUL NEAR THE LANDING ALONG THE BEACH, IN THE CAÑON, & ON THE BANKS OF IT. NOT SEEN ANYWHERE ELSE. IN FLOWER AT THE BEGINNING OF JANUARY.

47. ECHINOCYSTIS GUADALUPENSIS NAUD.

FOUND ONLY AMONG ROCKS ON THE RIGHT OF THE CAÑON, NOT FAR FROM THE LANDING, BUT IT IS SAID TO GROW ALL OVER THE ISLAND.

48.

LICHEN, GROWING EXCLUSIVELY ON THE DEAD BRANCHES OF THE CYPRESSES.

49.

USNEA? GROWING ON THE LIVING TRUNKS OF THE PALMS, BUT ONLY ON THE SIDE FACING THE SEA.

50.

LICHEN, ON ROCKS FACING THE SEA AMONG THE PALM GROVE, ON THE

NORTHWESTERN SIDE OF THE ISLAND.

51.

LICHEN, GROWING TOGETHER WITH THE PRECEDING.

52.

LICHEN, IN SHADY PLACES SEEN IN VARIOUS PARTS OF THE ISLAND.

53. CLAYTONIA PERFOLIATA DONN.

QUITE COMMON FROM THE CENTER TO NORTH; MOST LUXURIANT UNDER THE PALMS, WHERE IT WAS IN BLOOM EARLY IN DECEMBER.

54. MALVA BOREALIS WALLM.

COMMON WEED EVERYWHERE, APPEARINGLY NOT MUGH LIKED BY GOATS.

55. KRYNITSKIA FOLIOSA GREENE

BED OF THE CAÑON AT THE LANDING.

56. BIS ELLISIA CHYSANTHEMIFOLIA BENTH.

CAÑON NEAR THE BEACH, AS ALSO ON THE UPPER REGION, BUT NOWHERE COMMON.

59. GILIA NEVINI GRAY

RATHER COMMON AMONG ROCKS IN VARIOUS PARTS OF THE ISLAND.

60. ESPEROCNIDE TENELLA TORR.

LIKE THE PRECEDING.

63. CHENOPODIUM MURALE LINN.

GROWING RATHER IN LARGE NUMBER ALONG THE BEACH AT THE LANDING, & ALSO ON THE ROCKS NEAR IT.